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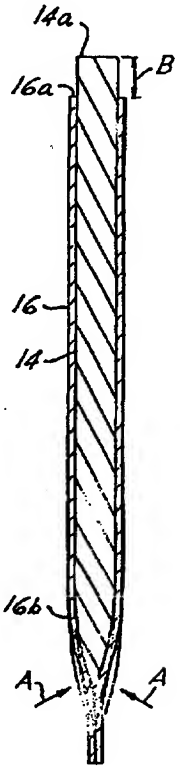
(54) Title: EDIBLE WRITING INSTRUMENT

(57) Abstract

An edible writing instrument having a crayon-like writing effect, prepared from edible materials, available in various colors and suitable for writing upon edible films. The edible writing instrument is preferably prepared from a stearine, such as edible vegetable oils/shortenings, and from FD & C approved food colorings, and optionally, from edible sweeteners and/or flavorings. The edible writing instrument is preferably created by heating the aforesaid vegetable oils/shortenings as per a selected formula in a double boiler to produce an aqueous solution, and then dispersing thereinto selected additional ingredients to produce an aqueous writing media. The aqueous writing media is then poured into a mold and then permitted to cool into a solidified writing media suitable for use in writing on edible films in the manner of a crayon. The preferred mold is a clear plastic drinking straw which is provided with a tapered, sealed end. The solidified writing media (14) remains resident in the plastic straw (16). In use, the user simply squeezes the straw at the taper, thereby causing a writing tip (14a) of the solidified writing media to emerge from the free end of the straw (16a) sufficient to allow for writing therewith.



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EDIBLE WRITING INSTRUMENT

BACKGROUND OF THE INVENTION

Field of the invention:

The present invention relates to writing instruments, and more particularly to an edible writing instrument. Still more particularly, the present invention relates to an edible writing instrument having a crayon-like writing effect, prepared from edible materials and suitable for writing upon edible films.

Description of the Prior Art:

In a co-pending patent application of Applicant, Serial number 08/088,125, filed July 7, 1993 and hereby incorporated by reference, Applicant has described an edible film for decorating foodstuffs. One of the uses to which such an edible film can be put involves customized writing upon the edible film for purposes of uniquely and personally decorating a foodstuff, such as a cake. While it is possible to use edible ink pens as a writing instrument for this purpose, it would be nice to have a crayon-like writing instrument for this purpose as well. Unfortunately, conventional crayons, while non-toxic, are not recommended for eating purposes. Further, conventional crayons do not write suitably upon edible films, in part because of their waxy nature.

Accordingly, what is needed is an edible writing instrument having a crayon-like look and feel, prepared from edible materials, available in various colors and suitable for writing upon edible films.

SUMMARY OF THE INVENTION

The present invention is an edible writing instrument having a crayon-like writing effect, prepared from edible materials, available in various colors and suitable for writing upon edible films.

The writing instrument according to the present invention is prepared from a stearine, preferably edible vegetable oils/shortenings, and from FD&C approved food colorings, and optionally, from edible sweeteners and/or flavorings.

The edible writing instrument is preferably created by heating the aforesaid vegetable oils/shortenings as per a selected formula in a double boiler to thereby change it into an aqueous solution, and then dispersing selected additional ingredients thereinto to thereby create an aqueous writing media. The aqueous writing media is then poured into a mold and

thereupon cooled into a solidified writing media suitable for use in writing on edible films in the manner of a crayon.

A preferred edible writing instrument is prepared from partially hydrogenated soybean and cottonseed oils with a dispersed selected FD&C food coloring. The preferred mold is a clear plastic drinking straw which is provided with a tapered, sealed end. The writing media remains resident in the plastic straw. In use, the user simply squeezes the straw at the taper, thereby causing the writing media to emerge from the free end of the straw sufficient to allow for writing therewith.

Accordingly, it is an object of the present invention to provide an edible writing instrument.

It is another object of the present invention to provide an edible writing instrument which has a crayon-like, grease pencil-like writing effect.

It is a further object of the present invention to provide an edible writing instrument which has a crayon-like, grease pencil-like writing effect and which is suitable for writing upon edible films.

It is an additional object of the present invention to provide an edible writing instrument which has a crayon-like, grease pencil-like writing effect and which is suitable for writing upon edible films and which is available in a number of edible colors, and optionally available with sweeteners and/or flavorings.

It is yet another object of the present invention to provide an edible writing instrument which has a crayon-like, grease pencil-like writing effect and which is suitable for writing upon edible films and which is available in a number of edible colors, and optionally available with sweeteners and/or flavorings, wherein the edible writing instrument is characterized by a straw-like protective sleeve and an interiorly disposed solidified writing media, the solidified writing media being slidably movable with respect to the protective sleeve to permit selective exposure and retraction of the writing tip of the solidified writing media with respect to the protective sleeve.

These, and additional objects, advantages, features and benefits of the present invention will become apparent from the following specification.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view of the edible writing instrument according to the present invention, shown being used to write on an edible film.

Figure 2 is a plan view of an apparatus for preparing plastic drinking straws for conversion into molds for the aqueous writing media prepared according to the present invention.

Figure 3 is a side view of the apparatus, seen along line 3-3 in Figure 2.

Figure 4 is a partly sectional side view of a heating unit for providing an aqueous solution used in preparing the aqueous writing media according to the present invention.

Figure 5 is a partly sectional front view of a system for filling the molds prepared by the apparatus of Figures 2 and 3.

Figure 6 is a side view of a mold for the aqueous writing media after the aqueous writing media has cooled into a solidified writing media via the system shown in Figure 5.

Figure 7 is a side view of a writing instrument according to the present invention after a sharp edge has cut the mold and the solidified writing media therewithin as depicted in Figure 6.

Figure 8 is a side view of the writing instrument of Figure 7 in which the tip of the solidified writing media has been exposed for writing as in Figure 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to Figure 1, the edible writing instrument 10 is shown being used to write upon an edible film 12 as described in Applicant's aforesaid patent application. The preferred structure of the edible writing instrument 10 is composed of a solidified writing media 14 which is reciprocably slidable within a protective sleeve 16. The writing effect produced by sliding the tip 14a of the solidified writing media 14 across the surface 12a of the edible film 12 produces a pleasing, crayon-like, grease pencil-like appearance. The structure, function and method of preparation of the edible writing instrument 10 will now be described in greater detail with reference being additionally had to Figures 2 through 8.

The solidified writing media 14 is prepared from a stearine, preferably a vegetable oil or shortening, but any similar food product is acceptable. As can be discerned from Figure 4, the vegetable oil or shortening 20 is placed into the upper portion 18a of a double boiler 18. Heat is applied via an electric stove coil 22, gas burner or other conventional heater device to the lower portion 18b of the double boiler. Water in the lower portion 18b thereof will begin to heat and cause the upper portion 18a to heat. Eventually, the melt temperature of the vegetable oil or shortening 20 is reached, whereupon it becomes an aqueous solution 20a. A stirring rod 24, or other stirring agency, is used to provide homogeneous mixing of the aqueous solution 20a. Now, an FD&C approved food coloring 26 is added to the aqueous

solution 20a and is caused to be homogeneously dispersed in the aqueous solution 20a by the stirring rod 24. Now, also, optionally flavoring 28 and/or sweetener 30 is added to the aqueous solution 20a and mixed therein by the stirring rod 24. The result of this preparation process is an aqueous writing media 14'.

Examples of preparation of the aqueous writing media 14' will now be given.

Example 1, A colored aqueous writing media with no sweetener or flavor, providing a solidified writing media having the writing look and feel of a smooth grease pencil or soft crayon:

100 ml (dry volume)	Master Chef (TM) Omega Flakes, a blend of both partially hydrogenated soybean and cottonseed oils. Mettler Drop Point: 126 degrees F.
2 grams	FD&C approved food coloring. For example: FD&C Blue #1, Aluminum Lake.

Example 2, A colored aqueous writing media with no sweetener or flavor, providing a solidified writing media having a more solid and stiffer look and feel than that of Example 1:

75 ml (dry volume)	Master Chef (TM) Omega Flakes, a blend of both partially hydrogenated soybean and cottonseed oils. Mettler Drop Point: 126 degrees F.
25 ml (dry volume)	Master Chef (TM) Stable Flakes, a partially hydrogenated soybean oil. Mettler Drop Point: 156 degrees F.
2.5 grams	FD&C approved food coloring. For example: FD&C Yellow #5, Aluminum Lake.

Example 3, A colored aqueous writing media with sweetener and flavoring:

100 ml (dry volume)	Master Chef (TM) Omega Flakes, a blend of both partially hydrogenated soybean and cottonseed oils. Mettler Drop Point: 126 degrees F.
3 ml Flavoring.	For example: lemon or banana via oils or extracts.

2 grams	Equal (TM) brand artificial sweetener.
2.5 grams	FD&C approved food coloring. For example: FD&C Red #40, Aluminum Lake.

After preparation of the aqueous writing media 14' as aforementioned, the aqueous writing media is poured into one or more molds whereby the aqueous writing media will cool into the shape of the mold. For example, a banana flavored aqueous writing media 14' may be poured into a banana shaped mold, to thereupon cool into a banana shaped solidified writing media 14.

A preferred mold for the aqueous writing media 14' is formed from a sanitary plastic drinking straw 16", preferably being see through ranging from clear to translucent. In this regard, one end of the drinking straw 16" is sealed, and the aqueous media 14' is poured into the opposite open end. An example of carrying-out this process will now be detailed.

Figures 2 and 3 depict an apparatus for providing sealed ends on a plurality of plastic drinking straws 16". A platen 32 is provided having a flat surface 32a upon which is formed a plurality of closely spaced semi-circular longitudinal grooves 34. The platen, like all components discussed herein which contact either the aqueous writing media or the solidified writing media, is composed of a food preparation approved material, such as a food preparation approved plastic. Each longitudinal groove 34 is dimensioned to receive a plastic drinking straw 16", wherein about one-half of the plastic drinking straw lies above the surface 32a. An alignment flange 36 is provided for abuttably engaging one end of the plastic drinking straws 16" to thereby align them positionally. Transverse grooves 38 are provided in the platen so that removal rods 40 may lie therein below the plastic drinking straws 16".

The platen 32 and the alignment flange 36 are positioned relative to a sealing machine 42 such that the opposite end of the drinking straws 16" are located at the sealing location 44 thereof. An example of a suitable sealing machine is manufactured by TEW Electric Heating Equipment Co., Ltd. The sealing location 44 of the sealing machine 42 is characterized by a mechanically driven, spring biased head 46a and an opposite heating element anvil 46b. In operation, the mechanical linkages within the sealing machine 42 cause the spring biased head 46a to pinch the plurality of plastic drinking straws 16" against the heating element anvil 46b to thereby cause the straws to be heated sufficient to seal closed the end of the straws. The sealing is predetermined to provide a tapered sealed end 16b (see Figure 6).

Accordingly, a plurality of molds 16' are thereby formed. Preferably, sealing is performed adjacent an end of the plastic drinking straws in order to minimize waste. The rods 40 are lifted to cause easy removal of the molds 16' from the longitudinal grooves 34.

The molds 16' are next placed into a rack 48 so that the open end 16a thereof faces upwardly and the sealed end 16b faces downwardly. Now, the aqueous writing media 14' is poured into the open end 16a of each of the molds 16'. This may be done manually using a squeeze bottle 50 with a pour spout 50a or this may be done in an automated manner using dispensing machinery. Preferably, the rack 48 is located in water 52 having a temperature of around 65 to 70 degrees F. in order to ensure slow cooling of the aqueous writing media 14' without fragmentation occurring due to unequal contraction processes as cooling ensues.

Upon cooling of the aqueous writing media 14', the solidified writing media 14 is formed within the molds 16'. The rack 48 is provided with an upper bracket member 54. As shown in Figures 5 and 6, a razor blade 56 or other sharp instrument is passed along the upper bracket member 54 to thereby cause the molds 16' to be cut through the solidified writing media 14 below the cavitation zone 14a thereof, thereby forming an edible writing instrument 10 having a solidified writing media 14 surrounded by a protective sleeve 16, as shown in Figure 7.

As shown in Figure 8, when a user wishes to use the writing instrument 10, he or she simply uses his or her fingers to pinch the tapered, sealed end 16b of the protective sleeve 16 along arrows A to thereby cause the solidified writing media to reciprocably move such as to expose a tip portion 14a thereof, which may now be used for writing as shown in Figure 1. The protective sleeve 16 serves to provide a sanitary way to hold the solidified writing media and adds structural integrity so that even if the solidified writing media cracks into pieces, it is still held together by the protective sleeve in an elongated shape suitable for being held and used for writing.

Thus, the solidified writing media 14 may be alternatively exposed (for writing) and retracted (when not in use) by movement as indicated by arrow B in Figure 8. As the solidified writing media gets used up, the user may optionally cut the protective sleeve 16 to keep its length minimized with respect to the remaining length of the solidified writing media.

While a preferred embodiment of the edible writing instrument is to have a protective sleeve provided by a plastic drinking straw, it is to be understood that the solidified writing media 14 may have any shape and is self supporting so as to require no protective sleeve. In this case, the solidified writing media is removed from the mold preceding its use as a writing instrument according to the present invention.

Any color food suitable coloring may be present in the solidified writing media 14.

Although the preferred formulation of the solidified writing media 14 has no discernible sweetness, any sweetener such as sugar or an artificial sweetener may be used. The solidified writing media 14 may be formulated to have the qualities associated with a confectionary.

Although the preferred formulation of the solidified writing media has no discernible flavor, any flavoring such as food suitable oils and extracts may be used. For example (as aforementioned), a banana shaped writing instrument may have a banana taste.

Finally, while it is preferred for the writing instrument according to the present invention to be used with respect to writing upon an edible film, it may be used with any other suitable surface, in particular any food surface where edibility must be ensured.

To those skilled in the art to which this invention appertains, the above described preferred embodiment may be subject to change or modification. Such change or modification can be carried out without departing from the scope of the invention, which is intended to be limited only by the scope of the appended claims.

WHAT IS CLAIMED IS:

1. An edible writing instrument, comprising:

a solidified writing media prepared from a stearine, said solidified writing media having a preselected shape for being held by a user; and

a food coloring dispersed in said solidified writing media.

2. The edible writing instrument of Claim 1, further comprising at least one of a sweetener and a flavoring.

3. The edible writing instrument of Claim 1 or 2, wherein said stearine is selected from the group consisting of vegetable oil and a vegetable shortening.

4. The edible writing instrument of Claim 1, 2 or 3 further comprising a protective sleeve having an open end and an opposite closed end; wherein said solidified writing media is disposed within said protective sleeve, said solidified writing media being reciprocable movable with respect to said protective sleeve to thereby selectively expose a writing tip of said solidified writing media with respect to said protective sleeve, preferably wherein said closed end is tapered.

5. The edible writing instrument of Claim 4, wherein said protective sleeve is composed of a material which permits said solidified writing media to be seen therethrough.

6. A method for preparing an edible writing instrument, comprising the steps of:

selecting a quantity of solid stearine material;

heating the quantity of stearine material to thereby cause melting;

dispersing selected food coloring in liquefied stearine to thereby form a liquefied writing media;

preparing a mold of a predetermined shape;

placing the liquefied writing media into the mold; and

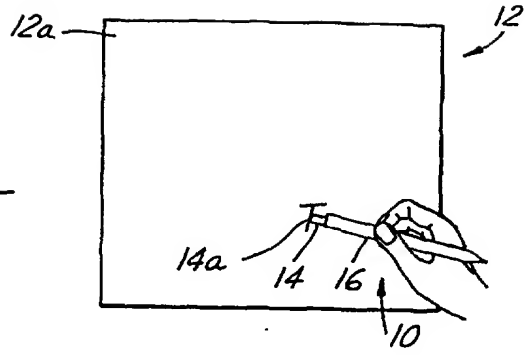
cooling the liquefied writing media in the mold to thereby convert the writing media into a solidified writing media in the mold.

7. The method of Claim 6, further comprising the step of removing the solidified writing media from the mold.

8. The method of Claim 7, further comprising the step of forming the mold and the solidified writing media so that the solidified writing media is reciprocably disposed within a protective sleeve.

9. The method of Claim 8, wherein said step of preparing provides a tapered, sealed end on the protective sleeve.

FIG.1



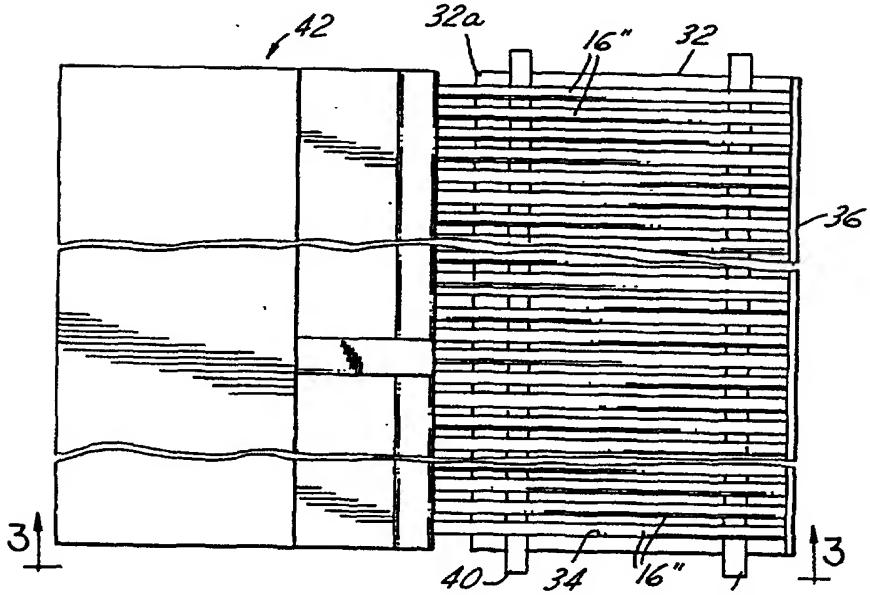
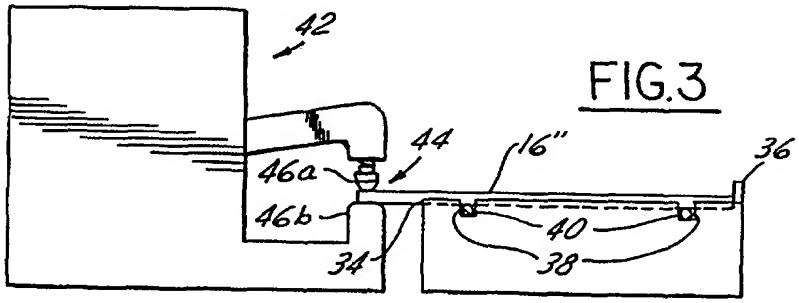


FIG.2

FIG.3



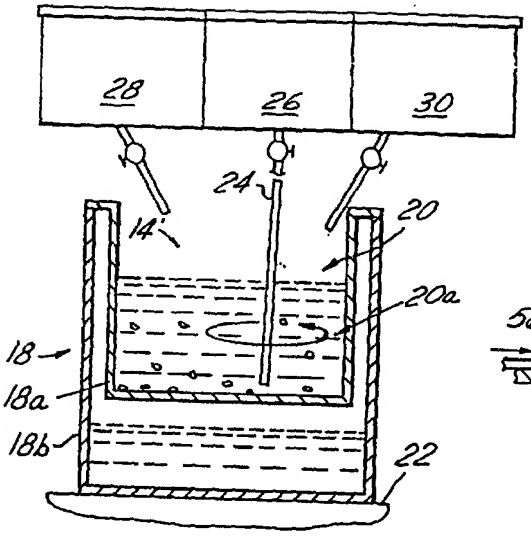


FIG. 4

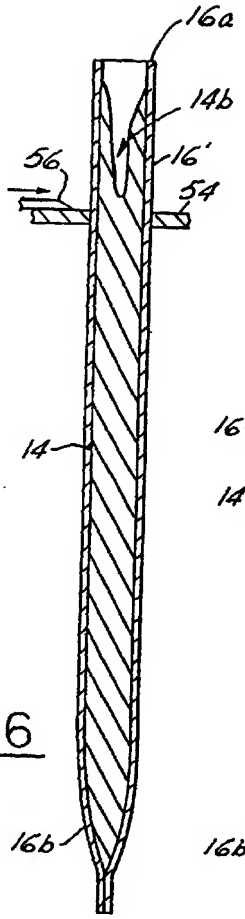


FIG. 6

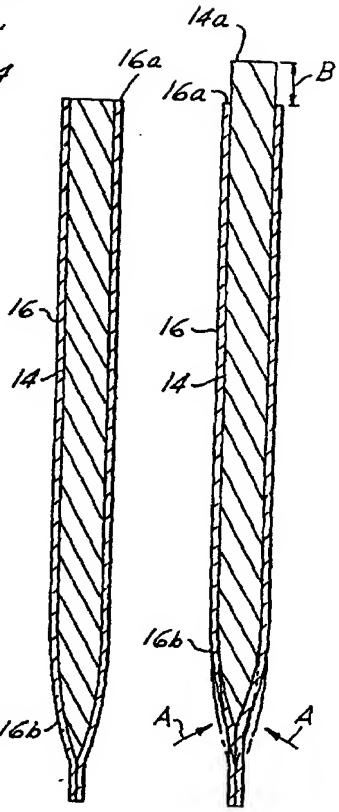
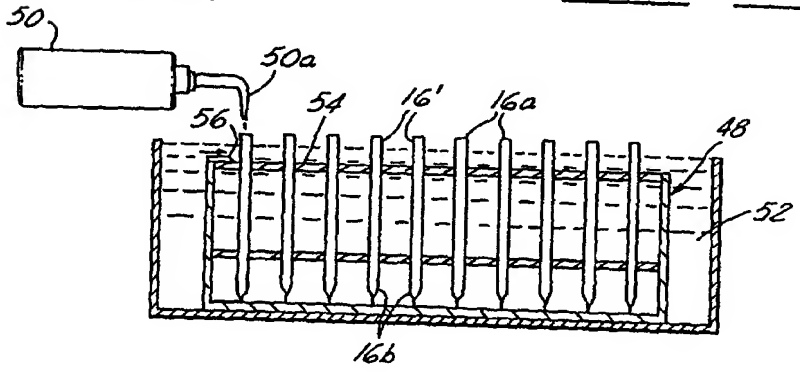


FIG. 7 FIG. 8

FIG. 5



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A23G3/28 A23G3/00

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B. FIELDS SEARCHED

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE WPI Week 8929, Derwent Publications Ltd., London, GB; AN 89-212340 & RO,A,96 376 (COMB UTILAJ GREU) 28 February 1989 see abstract ---	1,3
X	DATABASE WPI Week 8434, Derwent Publications Ltd., London, GB; AN 84-211424 & RO,A,83 691 (VICTORIA INTR CHIM CENT PROTECT ANTICOROZIV) 30 March 1984	1,3
Y	see abstract --- -/--	4,5

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Y	NL,A,8 104 919 (HAEN UDENHOUT) 16 May 1983 see claims; figure 2	4,5
A	FR,A,1 153 647 (SOC. ANON. DES ETABLISSEMENTS GOBEL) 19 March 1958 see the whole document	4
A	DE,U,86 22 147 (H. WEICKMANN ET AL.) 26 February 1987 see the whole document	1
A	NL,A,8 403 182 (AREND HOOGEVEEN) 16 May 1986 see the whole document	1,4

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FR-A-1153647		NONE	
DE-U-8622147	15-01-87	NONE	
NL-A-8403182	16-05-86	NONE	